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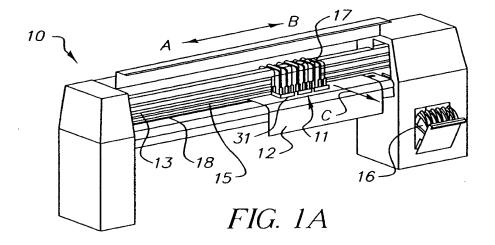
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## METHOD AND APPARATUS OF OPTIMIZING DISCRETE DROP VOLUMES FOR MULTIDROP CAPABLE INKJET PRINTERS Inventors Rodney L. Miller, et al US Serial No. 09/940,195



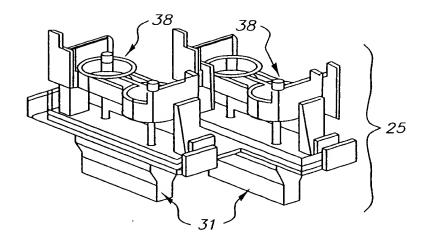


FIG. 1B

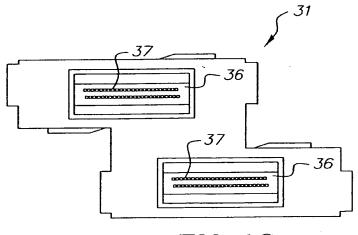


FIG. 1C



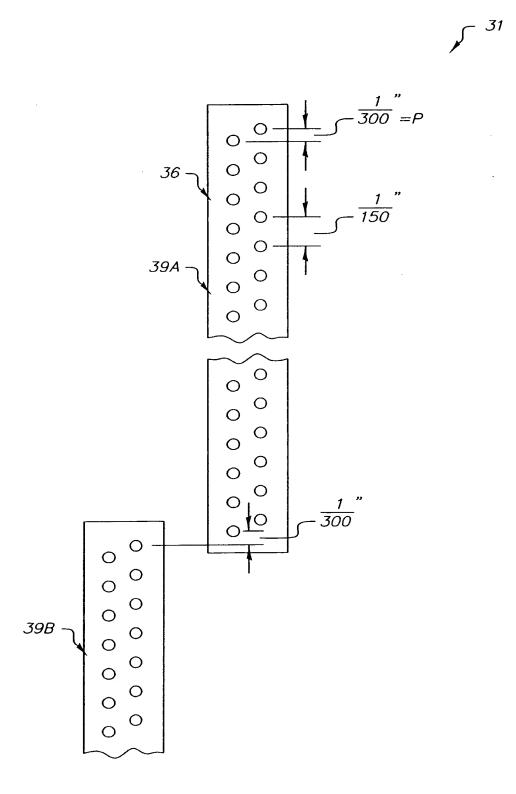
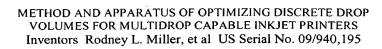
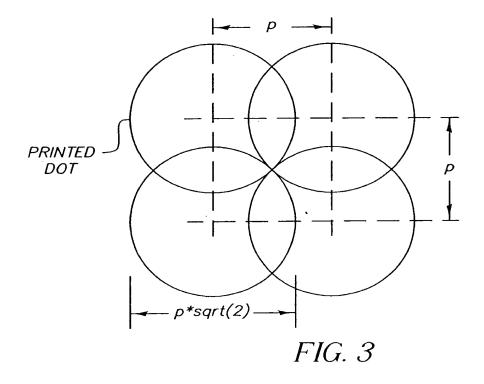


FIG. 2







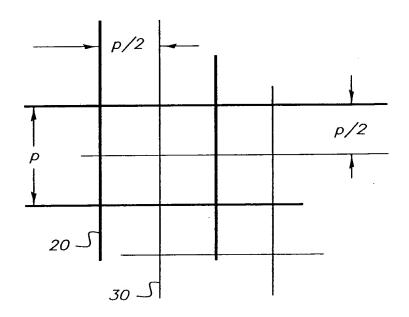
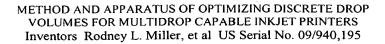


FIG. 4





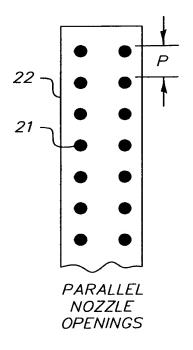


FIG. 5A

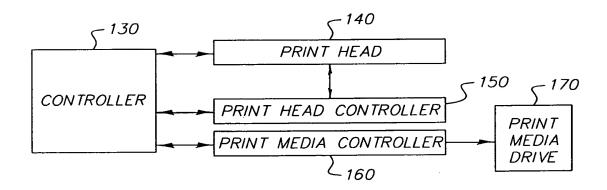
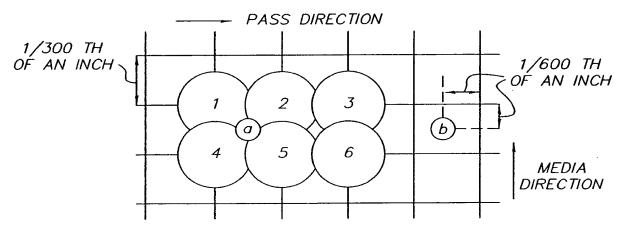


FIG. 5B





DROPS 1 TO 6 ARE ON THE ORIGINAL RASTER, DROPS A & B ARE ON THE SHIFTED RASTER

FIG. 6

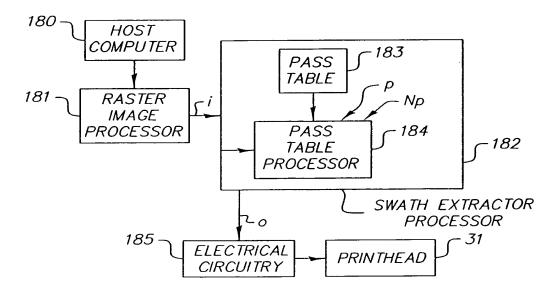
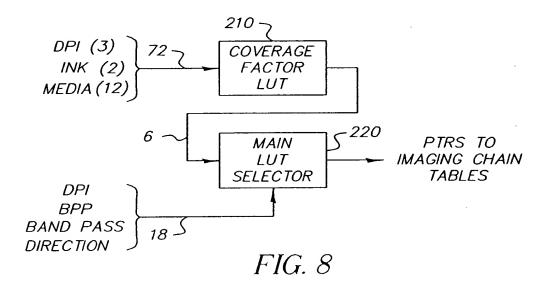


FIG. 7





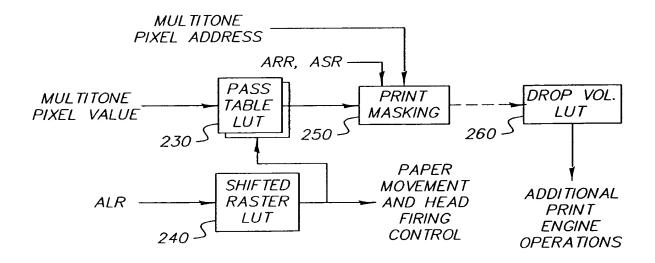


FIG. 9



#### REFERENCE RASTER PASS TABLE

MULTI-TONE LEVEL	DROP VOLUME INDEX
0	Α
1	С
2	Ε
3	F

FIG. 10A

#### SHIFTED RASTER PASS TABLE

MULTI-TONE LEVEL	DROP VOLUME INDEX
0	Α
1	Α
2	Α
3	В

FIG. 10B

SHIFTED RASTER LUT

PRINT	SHIFT
PASS	INDICATOR
0	F
1	T
2	F
3	T

FIG. 10C

#### PRINT MASK

0	1
1	0

FIG. 10D

DROP VOLUME LUT

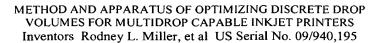
DROP VOLUME INDEX	DROP VOLUME
Α	0
В	8PL
С	16PL
D	32PL
E	48PL
F	64PL

FIG. 10E



METHOD AND APPARATUS OF OPTIMIZING DISCRETE DROP VOLUMES FOR MULTIDROP CAPABLE INKJET PRINTERS Inventors Rodney L. Miller, et al US Serial No. 09/940,195

0 4 0 0 0 8 0 0 4 0 0 8 0	0 0
84 0 8 0 0 8 0 0 8 0 0 8	0 0
0 84 0 9 0 0 0 8 84 0 0 0	00
31     0 </td <td>00</td>	00
0 91 0 84 0 0 0 0 91 0 0 0	00
000000000000000000000000000000000000000	00
	FIG. 11
HOST & & O	FIC
FROM HOST 3 3 3 3 3 0	
1MAGE 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3	
$\begin{array}{c c} 1170NE \\ 2 \\ 2 \\ 2 \\ (i,j)=1 \end{array}$	
2-BIT MULTITONE IMAGE  0 1 1 2 2  0 1 2 2  1 2 2 3  1 2 2 3	
2-B 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	





#### REFERENCE RASTER PASS TABLE

DROP VOLUME INDEX
Α
В
С
С
D
D
Ε
Ε
F
F
F
Α
Α
Α
Α
Α

SHIFTED RASTER
PASS TABLE

1 ASS TABLE		
MULTI- TONE LEVEL	DROP VOLUME INDEX	
0	Α	
1	Α	
2	А	
3	В	
4	Α	
5	В	
6	Α	
7	В	
8	Α	
9	В	
10	С	
11	Α	
12	Α	
13	Α	
14	Α	
15	Α	

SHIFTED RASTER LUT

PRINT PASS	SHIFT INDICATOR
0	F
1	Τ
2	F
3	T
4	F
5	Τ
6	F
7	Τ

FIG. 12C

FIG. 12A

FIG. 12B

#### PRINT MASK

0	1	0	1
1	. 0	1	0
0	1	0	1
1	0	1	0

FIG. 12D

#### DROP VOLUME LUT

DROP VOLUME INDEX	DROP VOLUME
Α	0
В	8PL
С	16PL
D	32PL
Ε	48PL
F	64PL

FIG. 12E



## METHOD AND APPARATUS OF OPTIMIZING DISCRETE DROP VOLUMES FOR MULTIDROP CAPABLE INKJET PRINTERS Inventors Rodney L. Miller, et al US Serial No. 09/940,195

REFERENCE RASTER PASS TABLE

DROP VOLUME INDEX
А
В
С
D
Ε
F
F
Α
Α
Α
A
А
Α
А
Α
Α

FIG. 13A

SHIFTED RASTER PASS TABLE

, ,	
MULTI- TONE LEVEL	DROP VOLUME INDEX
0	Α
1	Α
2	Α
3	Α
4	Α
5	Α
6	В
7	Α
8	Α
9	Α
10	Α
11	4

10 A
11 A
12 A
13 A
14 A
15 A

FIG. 13B

SHIFTED RASTER

PRINT PASS	SHIFT INDICATOR
0	F
1	T
2	F
3	Τ

FIG. 13C

PRINT MASK

0	1
1	0

FIG. 13D

#### DROP VOLUME LUT

DROP VOLUME INDEX	DROP VOLUME
Α	0
В	8PL
С	16PL
D	32PL
Ε	48PL
F	64PL

FIG. 13E